
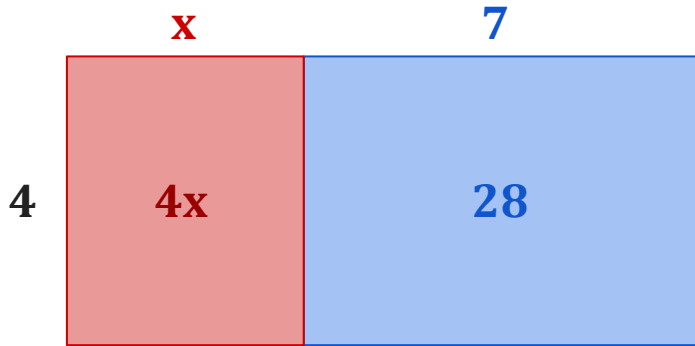


Distributive Property

*area of a rectangle:

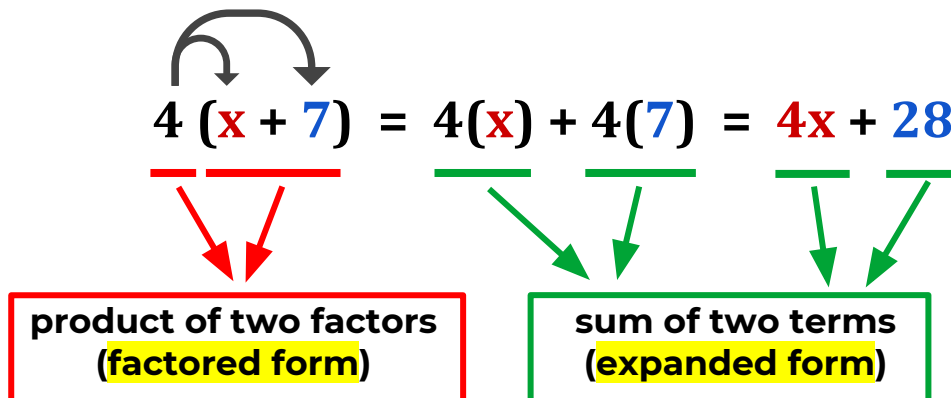


$= l \times w = l \cdot w = l(w)$



$$\begin{aligned} \text{Area of rectangle} &= 4(x + 7) && \text{product of two factors} \\ & && \text{(factored form)} \\ &= 4(x) + 4(7) && \text{sum of two terms} \\ &= 4x + 28 && \text{(expanded form)} \end{aligned}$$

The area of the rectangle represents the Distributive Property, which connects addition and multiplication.


$$4(x + 7) = 4(x) + 4(7) = 4x + 28$$

product of two factors (factored form)

sum of two terms (expanded form)

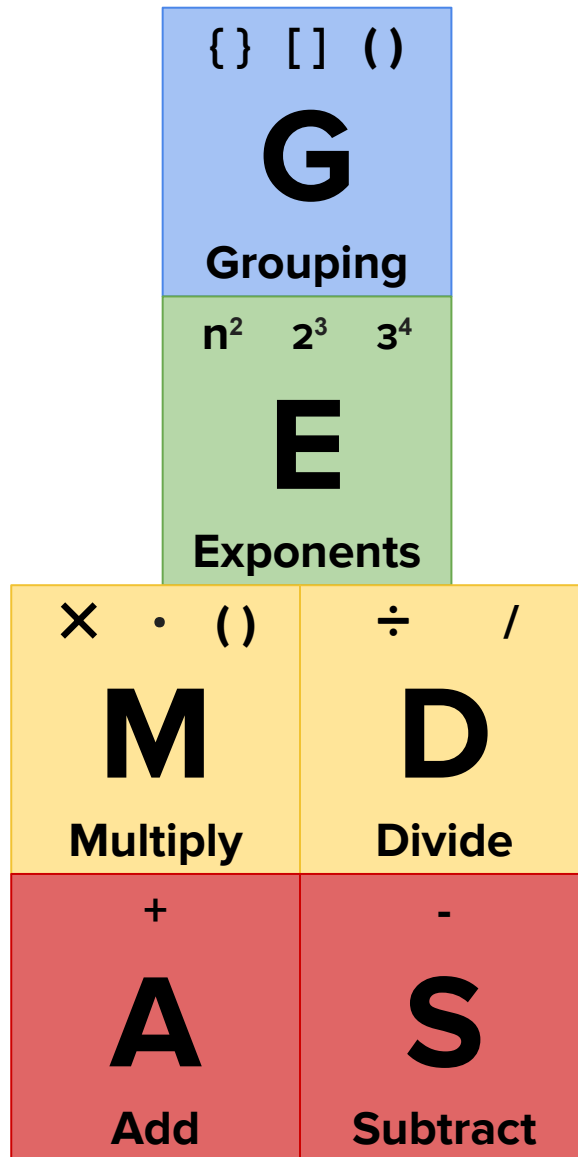
The distributive property allows us to write equivalent expressions.

$$\begin{aligned} 8 + 12 &= 4(2) + 4(3) \\ &= 4(2+3) \\ &= 4(5) \\ &= 20 \end{aligned}$$

$$\begin{aligned} 16 + 72 &= 8(2) + 8(9) \\ &= 8(2+9) \\ &= 8(11) \\ &= 88 \end{aligned}$$

$$\begin{aligned} 36 - 24 &= 4(9) - 4(6) \\ &= 4(9-6) \\ &= 4(3) \\ &= 12 \end{aligned}$$

Order of Operations



*When **Multiplication** and **Division** are in the same sentence, operate **left to right**.

*When **Addition** and **Subtraction** are in the same sentence, operate **left to right**.